Respectfully submitted,

Date: November 19, 2001
Reg. No. 41,418

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MARKED UP SPECIFICATION SHOWING AMENDMENTS

Brief Description of Drawings on page 4:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic representation of purifying a target nucleic acid molecule from [a] an extension sequencing reaction using an electrophoresis gel with capture probes immobilizing within a region of the gel.

FIG. 2 is a schematic representation of the steps involved in purifying extension products using a microtiter well comprising an electrophoretic medium containing capture probes immobilized within the medium.

FIG. 3 is the organization of sequencing and capture primers relative to the template, M13mp18 [SEQ ID NO. 3].

FIG. 4 is a schematic drawing illustrating the experimental design for DNA isolation using an electrophoretic medium.

FIG. 5 [is] shows the effects of varying the elution voltage.

FIG. 6 [is] shows results obtained from subjecting extension sequencing products to electrophoresis in which the electrophoretic medium contained immobilized capture probes; FIG. 6a shows the results of the experiment after running the gel for thirty minutes; FIG. 6b shows the results of the experiment after sixty minutes.

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To characterize the eluted products, samples of purified and crude sequencing products were subjected to electrophoresis in a polyacrylamide gel containing a discrete layer of gel immobilized capture probe arranged as a horizontal band across the width of the gel (see "Capture layer" in FIG. 6). The gel was composed of 5% polyacrylamide (29:1 monomer:bis wt/wt), 1 x TBE. The capture layer contained the same polyacrylamide and buffer with 10 μM of the 5'-acrylamide capture probe (5'-acrylamide-GGG ATC CTC TAG AGT CGA CCT 3' [SEQ ID No. 2 [6]). The samples were subjected to electrophoresis run at 150 Volts for 30 minutes (FIG. 6a) and 60 minutes (FIG. 6b). Lane 1 contains 15 μL of the sample that had been purified by electrophoretic capture and elution, and lane 2 contains 5 μL of the unpurified sequence product. Figure 6a shows that the hybridization-purified product (lane 1) has been purified away from the excess primers, which are seen in the unpurified sample at the bottom of lane 2.